

# STS-101 (3rd Space Station Flight)

## Atlantis

### Pad A

98th Shuttle mission  
21st flight OV-104  
22nd consecutive KSC landing

### Crew:

James D. Halsell Jr., Commander (5th space flight)  
Scott J. "Doc" Horowitz, Pilot (3rd)  
Mary Ellen Weber, Mission Specialist (2nd)  
James S. Voss, Mission Specialist (4th)  
Jeffrey N. Williams, Mission Specialist (1st)  
Susan J. Helms, Mission Specialist (4th)  
Yury Usachev, Mission Specialist and cosmonaut, (1st on Shuttle, twice on Mir)



### Orbiter Preps:

OPF 3 – Sept. 27, 1998; Feb. 17, 1999; Sept. 24, 1999  
VAB – Dec. 10, 1998 (storage); Feb. 8, 1999 (transfer aisle); July 26, 1999 (storage); Aug. 25, 1999 (transfer aisle); Sept. 1, 1999 (high bay 2); March 17, 2000  
Pad A– March 25, 2000

### Launch:

**May 19, 2000 at 6:11:10 a.m. EDT.** After three launch delays in April caused by high winds at the launch site and overseas emergency landing strips, Atlantis blasted off from KSC's Launch Pad 39A on time. A crew of six American astronauts and one Russian cosmonaut were on their way to pay a "home improvement" house call on the fledgling International Space Station (ISS).

### Landing:

**May 29, 2000, at 2:20:19 a.m. EDT,** Runway 15, Kennedy Space Center, Fla. Rollout distance: 8892 feet. Rollout time: 62 seconds. Wheel stop occurred at 2:21:17 a.m. EDT. Mission duration: 9 days, 20 hours, 9 minutes and 9 seconds. Landed on orbit 155. Logged 4,076,000 miles. Landed on first opportunity at KSC, marking the 22nd consecutive landing in Florida and 29th in the last 30 missions. Also the 14th nighttime landing in Shuttle history.

### Mission Highlights:

On their 10-day mission, the astronauts completed one space walk (EVA), equipped the ISS with new or replacement gear and transferred more than a ton of supplies into the Space Station for use by future residents of the ISS.

The EVA marked the fifth space walk for construction of the ISS, the 49th conducted

from a Space Shuttle, and the 85th overall conducted by U.S. astronauts. During the six-hour, 44-minute EVA, Mission Specialists James Voss and Jeffrey Williams secured a United States-built crane installed on the Station last year; installed the final parts of a Russian-built crane, Strela, on the Pressurized Mating Adapter-1 that connects the Unity node to the Zarya control module; replaced a faulty antenna for one of the station's communications systems; and installed several handrails and a camera cable on the ISS exterior. Mission Specialist Mary Ellen Weber operated the Shuttle's robotic arm, which she used to maneuver Voss during much of the space walk.

Work inside the Space Station followed. Before entering the Space Station, the crew opened various hatches into and within the different modules, in this order: PMA-2, Unity node, PMA-1, Zarya, and instrumentation cargo compartment on Zarya. Over the course of three days, the crew installed four batteries and associated electronics; 10 new smoke detectors in the Zarya module; four new cooling fans; additional cables for the Zarya computer to enhance capabilities; a new communications memory unit; and a new power distribution box for the U.S.-built communications system.

Next came the transfer of supplies – more than 3,300 pounds of gear ranging from clothes, tools, can openers, sewing kits and trash bags to a treadmill, an exercise bicycle

ergometer and IMAX film camera. The crew also filled four 12-gallon water containers for use by future resident astronauts aboard the ISS.

During the mission, Commander Halsell and Pilot Horowitz also fired Atlantis' jets three times to boost the ISS about 27 miles

Undocking with the Space Station occurred at 7:02 p.m. EDT, May 26. Pilot Horowitz backed Atlantis away and then flew a half-circle around the station before firing Atlantis' jets in a final separation burn at 7:41 p.m. EDT.

into a slightly higher orbit of 225 miles.

When stowage was complete, the crew reversed the procedure to close the hatches in the Space Station, with the final hatch shut at 4:40 a.m. EDT., May 26.